Moreover, restriction is improper because all claims pending in the application are closely related. For example, the claims of Examiner's Groups I–IV and VIII are all directed to a method of detecting or testing a bioactive compound or class of compounds, and the claims of Examiner's Groups V–VII are directed to a kit and apparatus used to detect or test bioactive compounds. Therefore, because all claims pending in the application are related, applicants request that the Restriction Requirement be withdrawn.

II. Applicants' method claims differ in form and scope

Even if, again solely for the purposes of argument, restriction between applicants' method claims (Groups I–IV and VIII) and applicants' test kit, cytosensor and valve claims (Groups V, VI and VII, respectively) is proper, restriction between applicants' method claims is improper. Applicants' method claims 1–15 and 25–27 of Examiner's Groups I–IV and VIII differ in form and scope. For example, claims 1–6 (Group I) are directed to a method for detecting bioactive compounds, and claims 7–9 (Group II) are directed to a method for identifying classes of bioactive compounds. The claims of both Groups I and II include detecting a response of a chromatophore to a bioactive compound. Thus, the claims of Groups I and II are directed to the same invention, differ in form and scope, and restriction between these two Groups therefore is improper.

Similarly, claim 10 (Group III) is directed to identifying a particular subclass of bioactive compounds, calcium channel blockers, and thus differs in scope from the claims of Group II, which are directed to identifying a class of bioactive compounds. Moreover, claims 11–15 (Group IV) are directed to detecting bioactivity of a test compound by "measuring a color response," whereas Group II is directed to identifying a class of compounds "based on detected responses of...chromatophores." Furthermore, claims 25–27 (Group VIII) are directed to a method of testing a bioactive compound that includes "determining a measured response of the chromatophore." Therefore restriction between Groups I–IV and VIII is improper because the claims are directed to a method of identifying, detecting or testing a class, subclass, or particular bioactive compound via a response of a chromatophore. Therefore, because the claims of Groups I–IV and VIII are related, and the claims differ only in form and scope, restriction

between these claims is improper. Applicants therefore request that the Restriction Requirement be modified and that claims 1–15 and 25–27 be examined together.

III. The Restriction Requirement does not establish a prima facie *case for restriction*

Even if, solely for the purposes of argument, the claims as grouped in the Restriction Requirement are independent and distinct, the Examiner has not met the burden of establishing reasons for insisting upon restriction. MPEP § 808.02 states that "[w]here the related inventions as claimed are shown to be distinct...the examiner, in order to establish reasons for insisting upon restriction, must show by appropriate explanation one of the following," separate classification, separate status in the art, or different field of search." The MPEP goes on to state "[w]here, however, the classification is the same and the field of search is the same and there is no clear indication of separate future classification and field of search, no reasons exist for dividing among related inventions." The claims of Groups I–IV and VIII all are grouped in class 424. Therefore, the allegedly distinct subjects do not have separate classification.

Furthermore, the Examiner does not demonstrate separate status in the art for each allegedly distinct subject within each classification. No evidence is cited that would support a conclusion of separate status for the allegedly distinct subjects other than the "different classification." Rather, the Restriction Requirement merely states the conclusion that "they have acquired a separate status in the art as a separate subject."

IV. Search and examination of Groups I–IV and VIII does not impose an undue burden

Applicants further submit that Groups I–IV and VIII are sufficiently closely related (the Groups have all been assigned to class 424), and the claims are sufficiently few in number as to allow the Examiner to search and examine all of these claims without serious burden. See, MPEP § 803, "If the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits..."

V. *Claim Amendments*

Finally, applicants have requested that claims 1, 3, 7, 10-11, 17 and 25 be amended for several reasons, including to more specifically claim the subject matter applicants regard as their

invention, to further address issues raised by the Restriction Requirement, and to correct certain minor typographical errors. No new matter is added by applicants' requested amendments. Following entry of these amendments, applicants submit that any restriction between the method claims of this application would be improper.

VI. Conclusion

For the reasons stated above, applicants request that the Restriction Requirement be withdrawn. Alternatively, applicants seek modification of the Restriction Requirement and examination of the method claims of Examiner's Groups I–IV and VIII in the present application.

The Examiner is invited to call the undersigned if there are any questions concerning this response or application.

Respectfully submitted,

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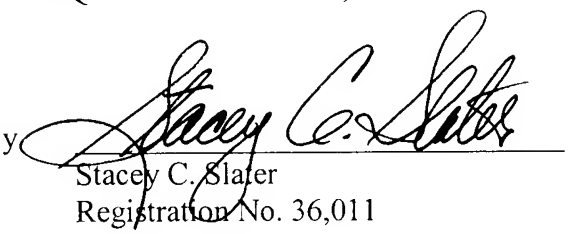
By 

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Marked-up Version of Amended Claims
Pursuant to 37 C.F.R. §§ 1.121(b)-(c)

1. (Amended) A method of detecting a bioactive compound, comprising:

exposing [fish] chromatophores to the bioactive compound; and

detecting a change in at least one chromatophore in response to the bioactive compound.

3. (Amended) The method of claim 1, wherein the chromatophores are fish chromatophores and changes in the at least one [fish] chromatophore is selected from a group consisting of pigment aggregation, pigment dispersion, and hue changes.

6. (Amended) The method of claim 1, wherein the [fish] chromatophores are Betta chromatophores.

7. (Amended) [A] The method of identifying [classes of] a bioactive [compounds] compound according to claim 1, comprising:

exposing a first type of chromatophore to a sample;

exposing a second type of chromatophore to a sample; and

identifying at least one class of compounds based on detected responses of the first and second types of chromatophores.

10. Amended) [A] The method of claim 1 useful for identifying a calcium channel blocker, comprising:

exposing an erythrophore chromatophore to a sample and producing an erythrophore response;

exposing a melanophore chromatophore to the sample and producing a melanophore response; and

determining if the sample includes a calcium channel blocker based on the erythrophore response and the melanophore response.

11. (Amended) [A] The method of [detecting bioactivity of a test compound,] claim 1 further comprising:

placing one or more color classes of chromatophores in functional contact with the compound; and

measuring a color response of at least one of the classes.

17. (Amended) The test kit of claim 16 wherein the positive control solution contains a compound selected from the group consisting of: norepinephrine, serotonin, forskolin, caffeine, [adensosine] adenosine, dopamine, melanocyte stimulating hormone, melanophore concentrating hormone, and structural and pharmacological analogs, agonists and antagonists of such compounds.

25. (Amended) [A] The method of claim 1 further [of testing a bioactive compound,] comprising:

selecting a test cell that produces a cell-induced response on [a] the at least one chromatophore;

exposing a combination of the at least one chromatophore and the test cell to the bioactive compound;

exposing the combination to a control compound selected based on a control response produced on the chromatophore;

determining a measured response of the chromatophore to the exposure of the combination to the control compound; and

evaluating the bioactive compound based on a difference in the measured response, the cell-induced response, and the control response[.].